(2)

INSTALLATION RESTORATION PROGRAM

PRELIMINARY ASSESSMENT

280th Combat Communications Squadron

Abston Air National Guard Station
Alabama Air National Guard
Montgomery, Alabama

February 1991

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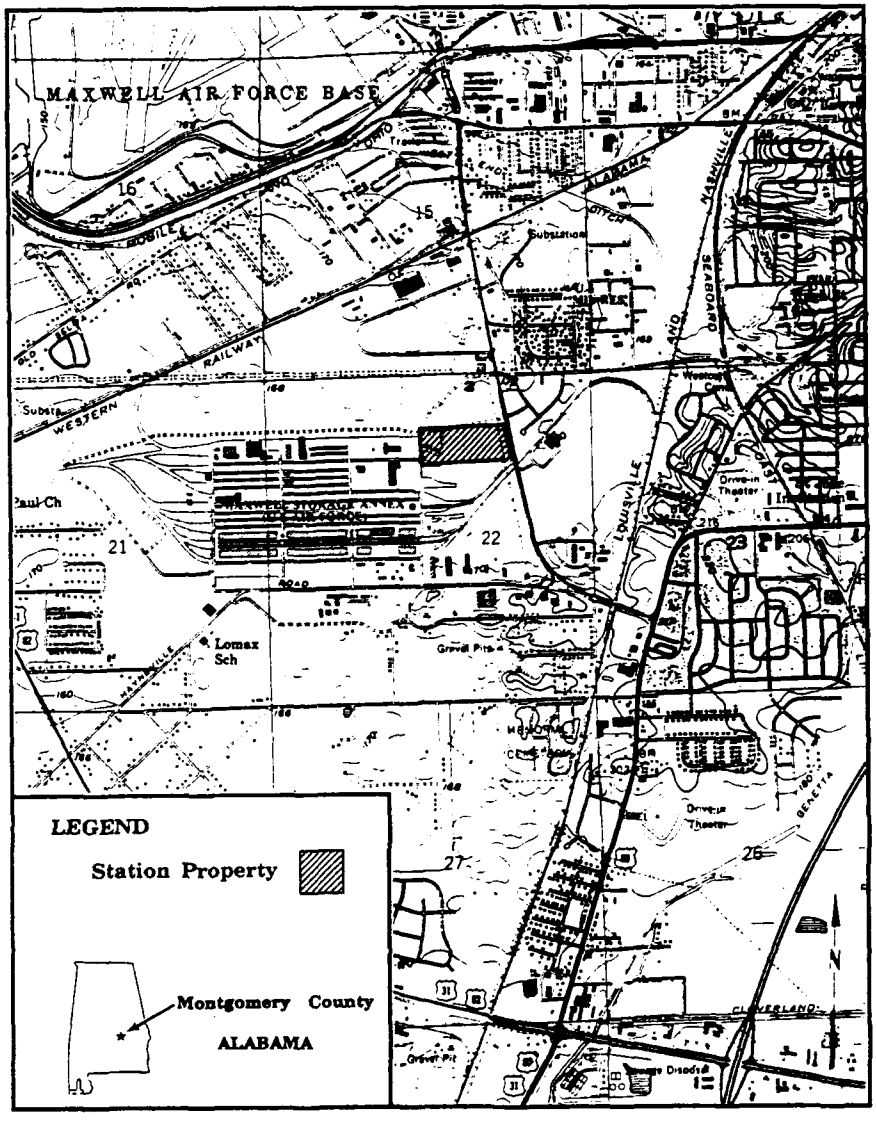

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Preliminary environmental assessment for the Abston Air National Guard Station, as part of the Installation Restoration Program. The report reflects data gathered from records review, interviews and a site visit. No sites were identified as potentially contaminated and the base will be recommended for no further action.

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INSTALLATION RESTORATION PROGRAM
PRELIMINARY ASSESSMENT

280th COMBAT COMMUNICATIONS SQUADRON
ABSTON AIR NATIONAL GUARD STATION
ALABAMA AIR NATIONAL GUARD
MONTGOMERY, ALABAMA

Prepared for

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Andrews Air Force Base, Maryland 20331-6008

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ACRONYM LIST

AMSL	Above Mean Sea Level
ANG	Air National Guard
CCS	Combat Communications Squadron
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CES	Civil Engineering Squadron
CFR	Code of Federal Regulations
DEQPPM	Defense Environmental Quality Program Policy Memorandum
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOT	Department of Transportation
EO	Executive Order
EPA	Environmental Protection Agency
FR	Federal Register
FS	Feasibility Study
HAS	Hazard Assessment Score
HAZWRAP	Hazardous Waste Remedial Actions Program
IRP	Installation Restoration Program
MOGAS	Automotive Gasoline
NGB	National Guard Bureau
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PL	Public Law
POC	Point of Contact
RCRA	Resource Conservation and Recovery Act of 1976
R&D	Research and Development
RI	Remedial Investigation
SARA	Superfund Amendments and Reauthorization Act of 1986
SciTek	Science & Technology, Inc.
SI	Site Investigation
USAF	United States Air Force
USC	United States Code
USDA	United States Department of Agriculture
USGS	United States Geological Survey

EXECUTIVE SUMMARY

A. INTRODUCTION

Science & Technology, Inc. (SciTek) was retained to conduct the Installation Restoration Program (IRP) Preliminary Assessment (PA) of the 280th Combat Communications Squadron (CCS), Abston Air National Guard (ANG) Station [hereinafter referred to as the Station], Alabama Air National Guard, located at Montgomery, Alabama. For the purpose of this document, the Station shall include the total area leased by the 280th CCS, at Montgomery, Alabama.

The PA included the following activities:

- o an on-site visit, including interviews with a total of four persons familiar with Station operations, and field surveys by SciTek representatives during the week of April 16-20, 1990;
- o acquisition and analysis of information on past hazardous materials use, waste generation, and waste disposal at the Station;
- o acquisition and analysis of available geological, hydrological, meteorological, and environmental data from federal, state, and local agencies; and
- o the identification and assessment of sites on the Station that may have been contaminated with hazardous wastes.

B. MAJOR FINDINGS

The 280th CCS has generated negligible quantities of hazardous wastes in mission-oriented operations and maintenance at the Station since 1987.

The field surveys and interviews resulted in no sites being identified that exhibit the potential for contaminant presence and migration.

C. CONCLUSIONS

It has been concluded there are no potentially contaminated sites at the Station.

D. RECOMMENDATIONS

No further work under the IRP is recommended.

I. INTRODUCTION

A. Background

The 280th Combat Communications Squadron (CCS), Abston Air National Guard (ANG) Station [hereinafter referred to as the Station] is located at Montgomery, Alabama. The 280th CCS has been active at their present location since 1987. Both the past and current operations have involved the use of potentially hazardous materials and the disposal of wastes. Because of the use of these materials and the disposal of resultant wastes, the National Guard Bureau (NGB) has implemented the Installation Restoration Program (IRP).

The IRP is a comprehensive program designed to:

- Identify and fully evaluate suspected problems associated with past hazardous waste disposal and/or spill sites on Department of Defense (DoD) installations and

- Control hazards to human health, welfare, and the environment that may have resulted from these past practices.

During June 1980, DoD issued a Defense Environmental Quality Program Policy Memorandum (DEQPPM 80-6) requiring identification of past hazardous waste disposal sites on DoD installations. The policy was issued in response to the Resource Conservation and Recovery Act of 1976 (RCRA) and in anticipation of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, Public Law (PL) 96-510), commonly known as "Superfund." In August 1981, the President delegated certain authority specified under CERCLA to the Secretary of Defense via an Executive Order (EO 12316). As a result of EO 12316, DoD revised the IRP by issuing DEQPPM 81-5 (December 11, 1981), which reissued and amplified all previous directives and memoranda.

Although the DoD IRP and the Environmental Protection Agency (EPA) Superfund programs were essentially the same, differences in the definition of program activities and lines of authority resulted in some confusion between DoD and state/federal regulatory agencies. These difficulties were rectified via passage of the Superfund Amendments and Reauthorization Act (SARA, PL-99-499) of 1986. On January 23, 1987, Presidential Executive Order EO 12580 was issued. EO 12580 effectively revoked EO 12316 and implemented the changes promulgated by SARA.

The most important changes effected by SARA included the following:

- Section 120 of SARA provides that federal facilities, including those in DoD, are subject to all provisions of CERCLA/SARA concerning site assessment, evaluation under the National Contingency Plan [40CFR300], listing on the National Priorities List, and removal/remedial actions. DoD must therefore comply with all the procedural and substantive requirements (guidelines, rules, regulations, and criteria) promulgated by the EPA under Superfund authority.

- Section 211 of SARA also provides continuing statutory authority for DoD to conduct its IRP as part of the Defense Environmental Restoration Program (DERP). This was accomplished by adding Chapter 160, Sections 2701-2707 to Title 10 United States Code (10 USC 160).

- SARA also stipulated that terminology used to describe or otherwise identify actions carried out under the IRP shall be substantially the same as the terminology of the regulations and guidelines issued by the EPA under their Superfund authority.

As a result of SARA, the operational activities of the IRP are currently defined and described as follows:

- **Preliminary Assessment**

  The Preliminary Assessment (PA) process consists of personnel interviews and a records search designed to identify and evaluate past disposal and/or spill sites that might pose a potential and/or actual hazard to public health, public welfare, or the environment. Previously undocumented information is obtained through the interviews. The records search focuses on obtaining useful information from aerial photographs; Station plans; facility inventory documents; lists of hazardous materials used at the Station; Station subcontractor reports; Station correspondence; Material Safety Data Sheets; federal/state agency scientific reports and statistics; federal administrative documents; federal/state records on endangered species, threatened species, and critical habitats; documents from local government offices; and numerous standard reference sources.

o **Site Inspection/Remedial Investigation/Feasibility Study**

The Site Inspection consists of field activities designed to confirm the presence or absence of contamination at the potential sites identified in the PA. An expanded Site Inspection has been designed by the Air National Guard as a Site Investigation. The Site Investigation (SI) will include additional field tests and the installation of monitoring wells to provide data from which site-specific decisions regarding remediation actions can be made. The activities undertaken during the SI fall into three distinct categories: screening activities, confirmation and delineation activities, and optional activities. Screening activities are conducted to gather preliminary data on each site. Confirmation and delineation activities include specific media sampling and laboratory analysis to confirm either the presence or the absence of contamination, levels of contamination, and the potential for contaminant migration. Optional activities will be used if additional data is needed to reach a decision point for a site. The general approach for the design of the SI activities is to sequence the field activities so that data are acquired and used as the field investigation progresses. This is done in order to determine the absence or presence of contamination in a relatively short period of time, optimize data collection and data quality, and to keep costs to a minimum.

The Remedial Investigation (RI) consists of field activities designed to quantify and identify the potential contaminant, the extent of the contaminant plume, and the pathways of contaminant migration.

If applicable, a public health evaluation is performed to analyze the collected data. Field tests, which may necessitate the installation of monitoring wells or the collection and analysis of water, soil, and/or sediment samples, are required. Careful documentation and quality control procedures in accordance with CERCLA/SARA guidelines ensure the validity of data. Hydrogeologic studies are conducted to determine the underlying strata, groundwater flow rates, and direction of contaminant migration. The findings from these studies result in the selection of one or more of the following options:

1. **No Further Action** - Investigations do not indicate harmful levels of contamination that pose a significant threat to human health or the environment. The site does not warrant further IRP action, and a Decision Document will be prepared to close out the site.

2. **Long-Term Monitoring** - Evaluations do not detect sufficient contamination to justify costly remedial actions. Long-term monitoring may be recommended to detect the possibility of future problems.

3. **Feasibility Study** - Investigation confirms the presence of contamination that may pose a threat to human health and/or the environment, and some sort of remedial action is indicated. The Feasibility Study (FS) is therefore designed and developed to identify and select the most appropriate remedial action. The FS may include individual sites, groups of sites, or all sites on an installation. Remedial alternatives are chosen according to engineering and cost feasibility, state/federal regulatory requirements, public health effects, and environmental impacts. The end result of the FS is the selection of the most appropriate remedial action with concurrence by state and/or federal regulatory agencies.

o **Remedial Design/Remedial Action**

The Remedial Design involves formulation and approval of the engineering designs required to implement the selected remedial action. The Remedial Action is the actual implementation of the remedial alternative. It refers to the accomplishment of measures to eliminate the hazard or, at a minimum, reduce it to an acceptable limit. Covering a landfill with an impermeable cap, pumping and treating contaminated groundwater, installing a new water distribution system, and in situ biodegradation of contaminated soils are examples of remedial measures that might be selected. In some cases, after the remedial actions have been completed, a long-term monitoring system may be installed as a precautionary measure to detect any contaminant migration or to document the efficiency of remediation.

o **Research and Development**

Research and Development (R&D) activities are not always applicable for an IRP site but may be necessary if there is a requirement for additional research and development of control measures. R&D tasks may be initiated for sites that cannot be characterized or controlled through the application of currently available, proven technology. It can also, in some instances, be used for sites deemed suitable for evaluating new technologies.

o **Immediate Action Alternatives**

At any point, it may be determined that a former waste disposal site poses an immediate threat to public health or the environment, thus necessitating prompt removal of the contaminant. Immediate action, such as limiting access to the site, capping or removing contaminated soils, and/or providing an alternate water supply may suffice as effective

control measures. Sites requiring immediate removal action maintain IRP status in order to determine the need for additional remedial planning or long-term monitoring. Removal measures or other appropriate remedial actions may be implemented during any phase of an IRP project.

B. Purpose

The purpose of this IRP PA is to identify and evaluate suspected problems associated with past waste handling procedures, disposal sites, and spill sites on Station property.

The potential for migration of hazardous contaminants was evaluated by visiting the Station, reviewing existing environmental data, analyzing Station records concerning the use of hazardous materials and the generation of hazardous wastes, and conducting interviews with current Station personnel who had knowledge of past waste disposal techniques and handling methods. Pertinent information collected and analyzed as part of the PA included a records search of the history of the Station; the local geological, hydrological, and meteorological conditions that might influence migration of contaminants; and ecological settings that indicate environmentally sensitive conditions.

C. Scope

The scope was limited to the identification of sites at or under primary control of the Station and evaluation of potential receptors. The PA included:

- an on-site visit during the week of April 16-20, 1990;
- acquisition of records and information on hazardous materials use and waste handling practices;
- acquisition of available geological, hydrological, meteorological, land use and zoning, critical habitat, and related data from federal and state agencies;
- a review and analysis of all information obtained; and
- preparation of a summary report to include recommendations for further action.

The subcontractor effort was conducted by the following Science & Technology, Inc. (SciTek) personnel: Mr. Tracy C. Brown, Environmental Analyst; Mr. Charles T. Goodroe, Environmental Protection Specialist; and Mr. Stephen

B. Selecman, Geologist/Hydrogeologist. Mr. Russ Dyer of the NGB is Project Officer for this Station. Ms. Patricia Franzen of the Hazardous Waste Remedial Actions Program (HAZWRAP) also participated in the station visit.

The point of contact (POC) at the Station was Major George R. McCurdy. Captain Michelle Fuller (187th Civil Engineering Squadron (CES)) was the representative from their civil engineering support facility.

D. Methodology

The PA began with a visit to the Station to identify all operations that may have utilized hazardous materials or may have generated hazardous wastes. Figure I.1 is a flow chart of the PA methodology.

Four current Station employees familiar with the various operating procedures were interviewed. These interviews were conducted to determine those areas where waste materials (hazardous or nonhazardous) were used, spilled, stored, disposed of, or released into the environment. The interviewees' knowledge and experience with Station operations averaged three years.

Records contained in the Station files were collected and reviewed to supplement the information obtained from the interviews.

Detailed geological, hydrological, meteorological, and environmental data for the area were obtained from the appropriate federal, state, and local agencies. A listing of agency contacts is included as Appendix A.

After a detailed analysis of all the information obtained, it was concluded that there are no sites potentially contaminated with hazardous wastes. However, when potiential sites are identified under the IRP program and when sufficient information is available, these sites are numerically scored and assigned a Hazard Assessment Score (HAS) using a hazard assessment rating methodology. However, the absence of a HAS does not necessarily negate a recommendation for further IRP investigation, but rather, may indicate a lack of data.

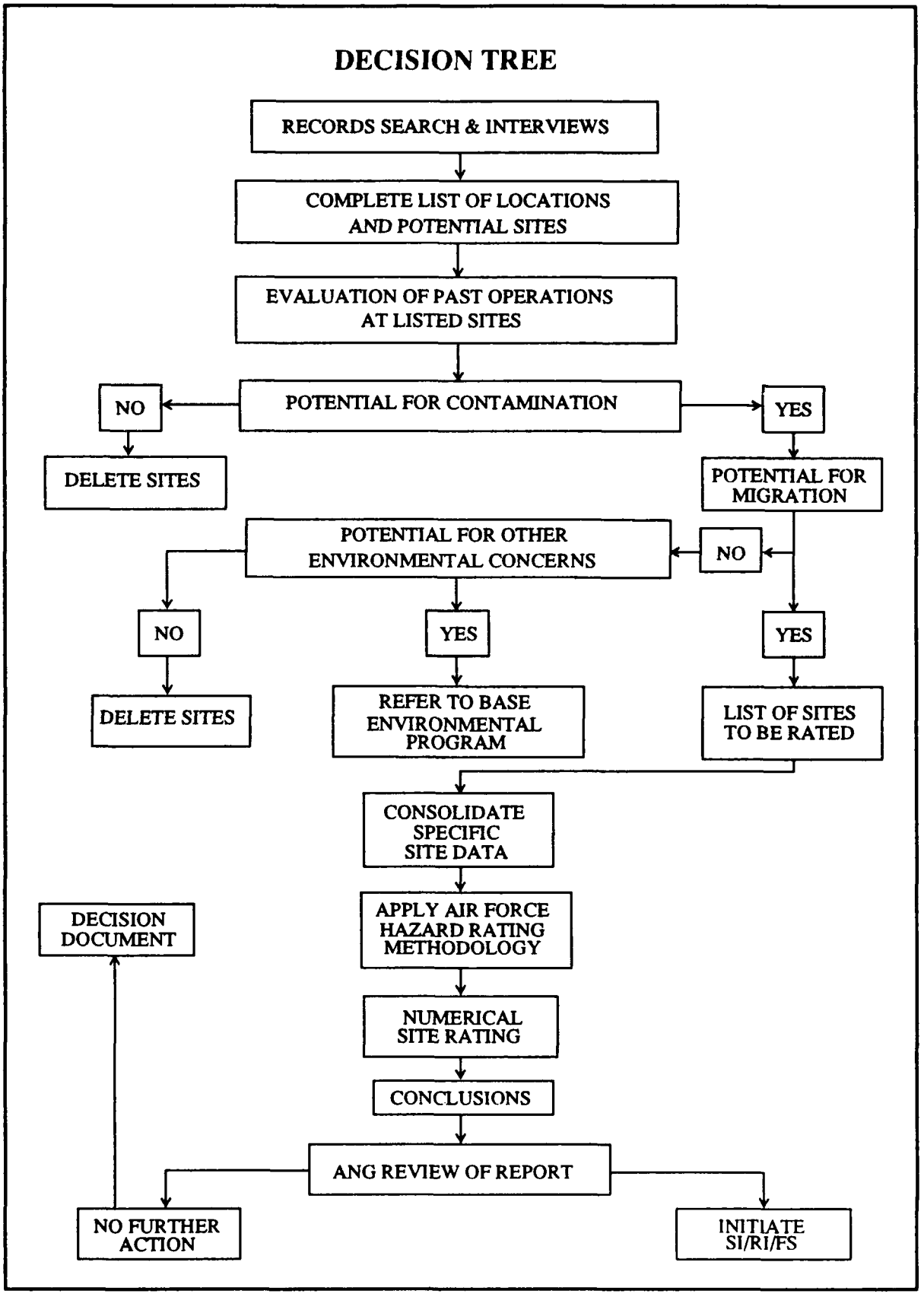


Figure I.1

Preliminary Assessment Methodology Flow Chart

II. INSTALLATION DESCRIPTION

A. Location

The Station is located approximately three quarters of a mile south of Maxwell Air Force Base within the city and county of Montgomery, Alabama. It is on the corner of Air Base Boulevard and Tine Street. The elevation of the Station is approximately 170 feet above mean sea level (AMSL). Figure II.1 illustrates the location and boundaries of the Station.

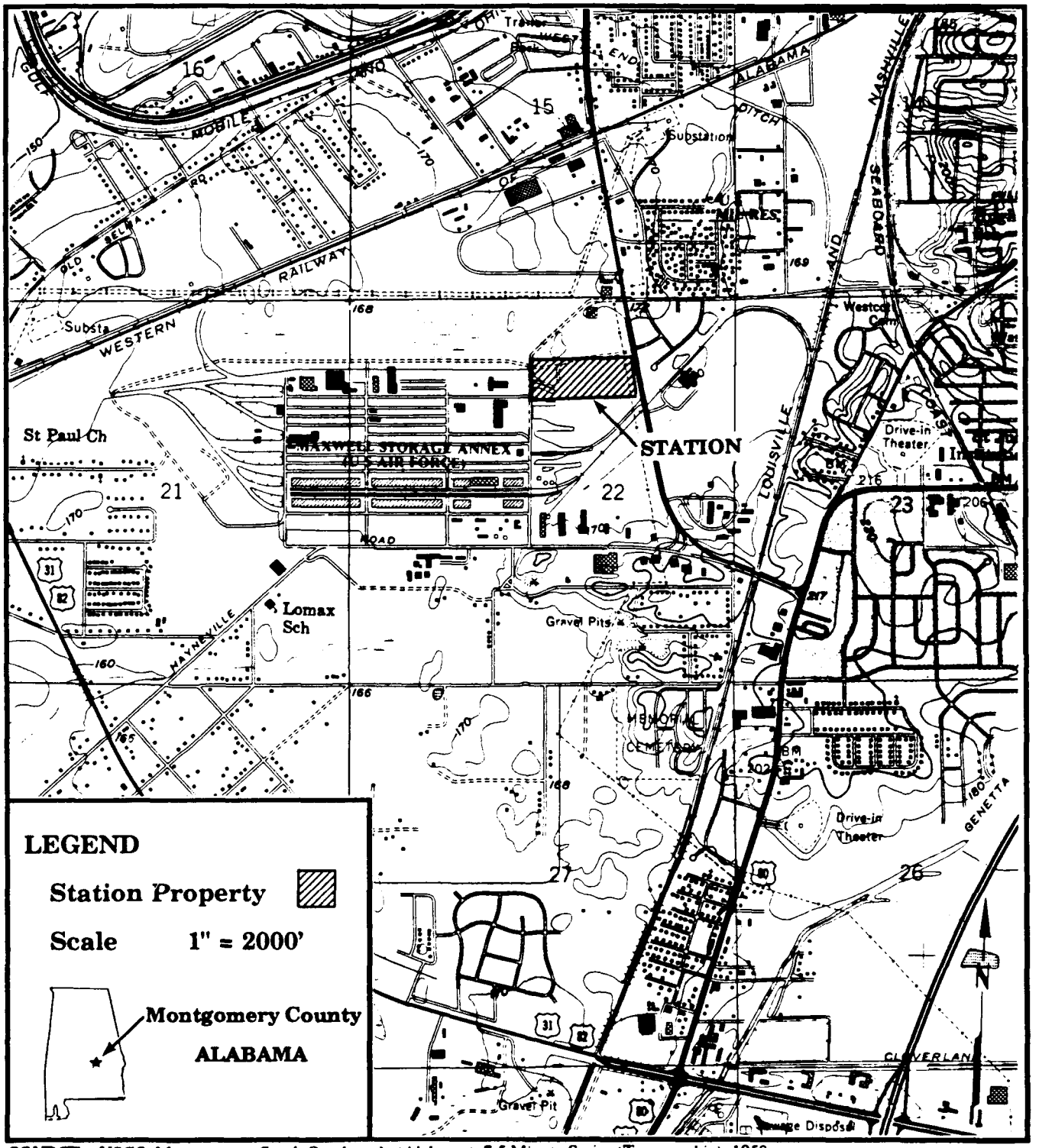
The Station occupies 15 acres and contains one principal structure to house the Headquarters element and all maintenance activities. The area is a flat, grassy field, bordered on three sides by roads and on the fourth side by tracks of the Western Alabama Railroad. The Station is completely fenced with controlled access. The unimproved acreage is used to conduct training and for parking of equipment. The population during the weekday numbers 13 members. Unit Training Assembly occurs one weekend per month. The Station population during this weekend is 107 members.

B. Organization and History

The peacetime mission of the 280th CCS is to utilize its assets as a test facility for communications and electronics equipment and to conduct training exercises. The wartime mission is classified.

The property the Station now occupies was originally owned by the city of Montgomery. In June of 1987, the 280th CCS moved from Maxwell Air Force Base to their present location and has occupied the property since that date. The principal structure is a large, one story building housing the Headquarters and Administrative elements in one portion of the building and the communications and electronic test facility in the other. The only other structure is a new, prefabricated metal building that will be used as a storage facility.

All maintenance services and repairs for vehicles are performed at Maxwell Air Force Base, and only preoperational checks are made on the Station equipment prior to its use. Essentially, no wastes are generated by these operations.



SOURCE: USGS, Montgomery, South Quadrangle (Alabama), 7.5 Minute Series (Topographic), 1958.

Figure II.1
Location Map of
the Abston Air National Guard Station

III. ENVIRONMENTAL SETTING

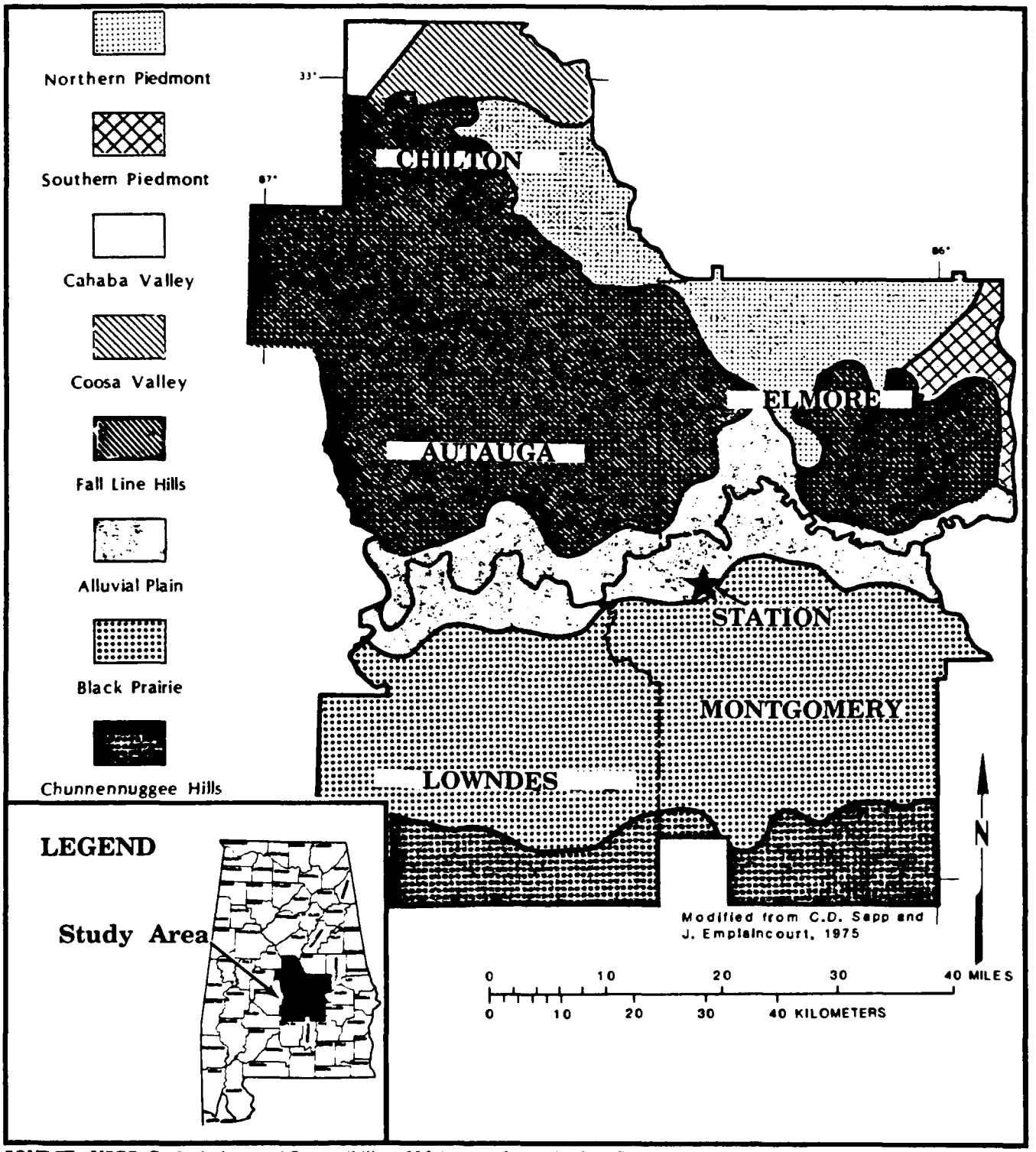
A. Meteorology

The following climatological data is largely derived from the Soil Survey of Montgomery County, Alabama (United States Department of Agriculture (USDA): Soil Conservation Service, September 1960). Montgomery County has a humid, mild, almost subtropical climate. The average annual precipitation, based on an 85-year record (1873-1958), was 51.12 inches and ranged from 26.82 inches in 1954 to 78.25 inches in 1929. By calculating net precipitation according to the method outlined in the Federal Register (47 FR 31224, July 16, 1982), a net precipitation value of 7.12 inches per year is obtained. Rainfall intensity, based on 1-year, 24-hour rainfall, is 2.75 inches (calculated according to 47 FR 31235, July 16, 1982, Figure 8). Most precipitation that falls from late April to early June occurs in the form of showers and thundershowers. Droughts have occurred in the spring, in the late summer, and in the early fall. From December until early April, average precipitation is high, and rivers overflow frequently. The average annual temperature over an 85-year period (1873-1958) was 68°F. The average monthly temperature ranged from 49.2°F in January to 81.7°F in July. Winds are usually light. Strong winds generally last only a short time, and dangerous or catastrophic winds are rare.

B. Geology

Montgomery County is in the northern part of the East Gulf Coastal Plain and encompasses parts of three physiographic districts: the Alluvial Plain, the Black Prairie, and the Chunnennuggee Hills. Specifically, the Station is located in the southern part of the Alluvial Plain district adjacent to the northern boundary of the Black Prairie district as illustrated in Figure III.1 (Scott et al, 1987). The topography is relatively flat in the immediate vicinity of the Station with surface elevations ranging from 160 to 168 feet above mean sea level.

Geologic formations that crop out in Montgomery County are of sedimentary origin and range from Late Cretaceous rocks overlying the crystalline basement complex to Pleistocene terrace deposits and Recent alluvium (Knowles et al, 1963). These stratigraphic units are shown in Figure III.2 where a detailed lithologic description and average thickness for each unit is given. The Cretaceous formations dip to the south at a rate of 40 to 50 feet per mile. Older formations crop out to the north except where overlain by Quaternary deposits, and younger formations crop out to the south as illustrated in Figure III.3 (Scott et al, 1987).



SOURCE: USGS, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama: Area 8, 1987.

Figure III.1

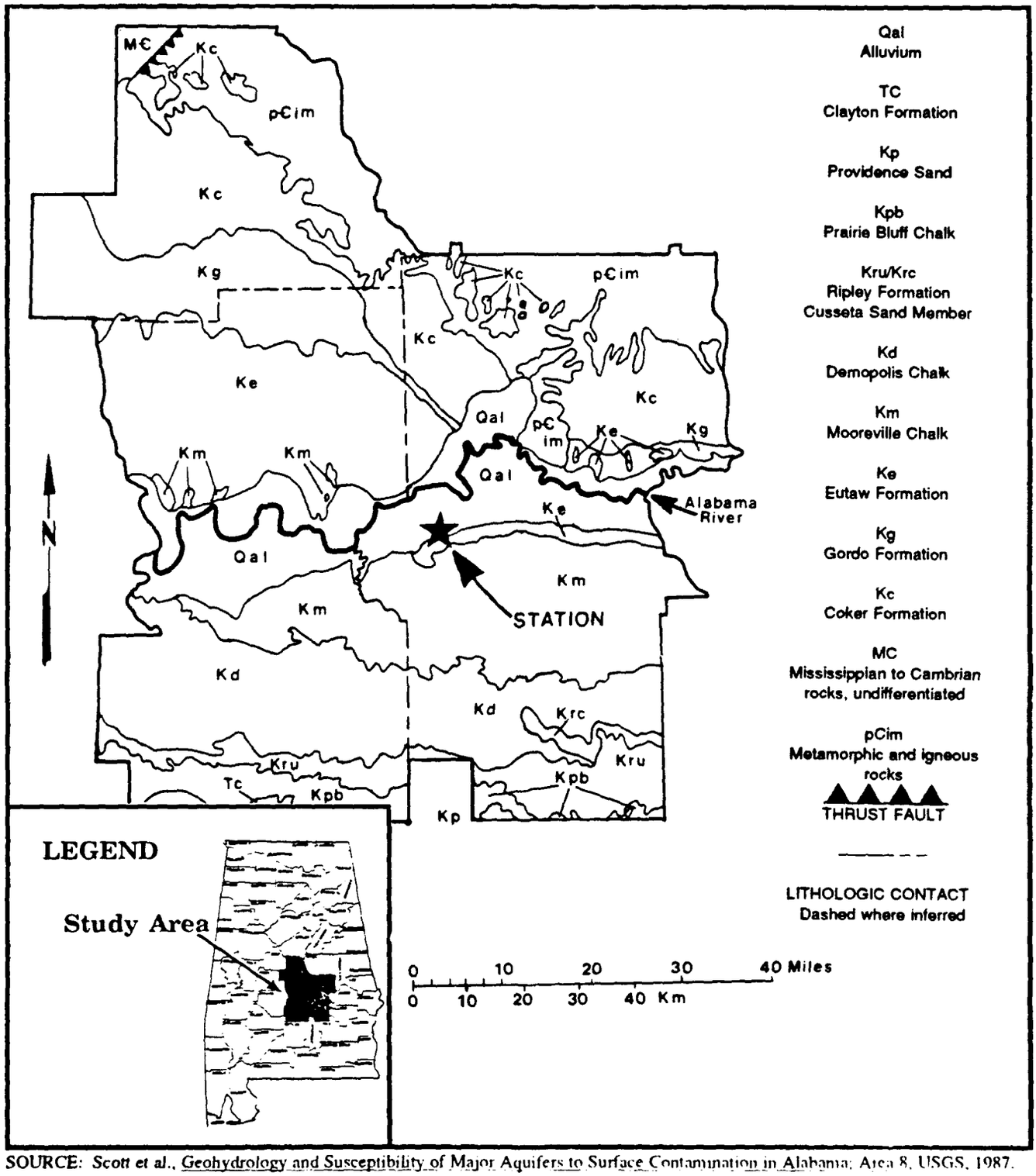
Physiographic Map of the Area

System	Series	Subdivision	Thickness (ft.)	Character	Water supply
Quaternary	Recent	Alluvium	0-20	Sand, gravel, silt, and clay, poorly sorted.	Yields small quantities of water to domestic and stock wells.
	Pleistocene	Terrace deposits	0-80	Sand, gravel, and clay, reddish-brown, poorly sorted.	Yield large quantities of water to municipal, industrial, and domestic wells.
Cretaceous	Upper Cretaceous	Selma group — Mooreville chalk	0-260	Chalk, clayey, sandy, fossiliferous. Base of chalk is glauconitic and contains phosphate nodules.	Yields little or no water to wells.
		Eutaw formation	200-400	Greenish-gray sand, fine- to medium-grained, glauconitic; greenish-gray clay, glauconitic, interbedded with sand. Thin beds of white sandstone in upper part.	Sands in the upper and lower part of formation are good aquifers. These aquifers yield moderate to large quantities of water to municipal and industrial wells.
		Tuscaloosa group — Gordo formation	210-350	Yellow sand, medium- to very coarse-grained, poorly sorted; varicolored clay interbedded with sand. Beds of gravel in lower part.	Sands in the upper and middle part of formation are good aquifers and supply water for municipal, industrial, and domestic use. Supplies water to flowing wells in low areas along Alabama River.
		Tuscaloosa group — Coker formation	550±	Greenish-gray sand, fine- to medium-grained; greenish-gray clay, lignitic, interbedded with sand.	Sands in the upper part of formation are good aquifers and supply water for municipal use.
Precambrian				Mica schist.	Yields no water to wells.

SOURCE: Powell et al., Interim Report on the Geology and Ground-Water Resources of Montgomery, Alabama and Vicinity, 1957.

Figure III.2

Generalized Stratigraphic Column of the Area



SOURCE: *Scott et al.*, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama: Area 8, USGS, 1987.

Figure III.3

Surficial Geologic Map of the Area

The Station is located in the Alabama River ancestral flood plain where it is underlain by Quaternary alluvial and terrace deposits (Figure III.3). Alluvial deposits range in thickness from 20 to 80 feet and consist generally of porous, poorly sorted sand, gravel, silt, and clay. At the Station location, the alluvium is approximately 45 feet thick and directly overlies the Cretaceous Eutaw Formation that crops out a short distance to the east in the adjacent hills. The Eutaw Formation consists of fine- to medium-grained glauconitic sand interbedded with calcareous sand, clay, and sandy clay. Its thickness is approximately 200 to 250 feet at this location (Knowles et al, 1963).

The soils underlying the site are generally composed of the Amite and Wickham fine sandy loams and the Roanoke silty loam. The Wickham soil occurs in the western and southern parts of the Station; the Amite soil exists to the north, and Roanoke soil exists to the east. Generally, the soil thickness ranges between 1 and 8 feet, and permeabilities are classified as moderately rapid (2.00 to 6.00 inches per hour or 1.41×10^{-3} to 4.24×10^{-3} cm/sec) to moderately slow (0.20 to 0.63 inches per hour or 1.41×10^{-4} to 4.45×10^{-4} cm/sec) for the group. The information pertaining to soils contained in the text was derived from the Soil Survey of Montgomery County, Alabama (United States Department of Agriculture (USDA): Soil Conservation Service, September 1960). Soil borings are available for the Station and can be found in Appendix B.

C. Hydrology

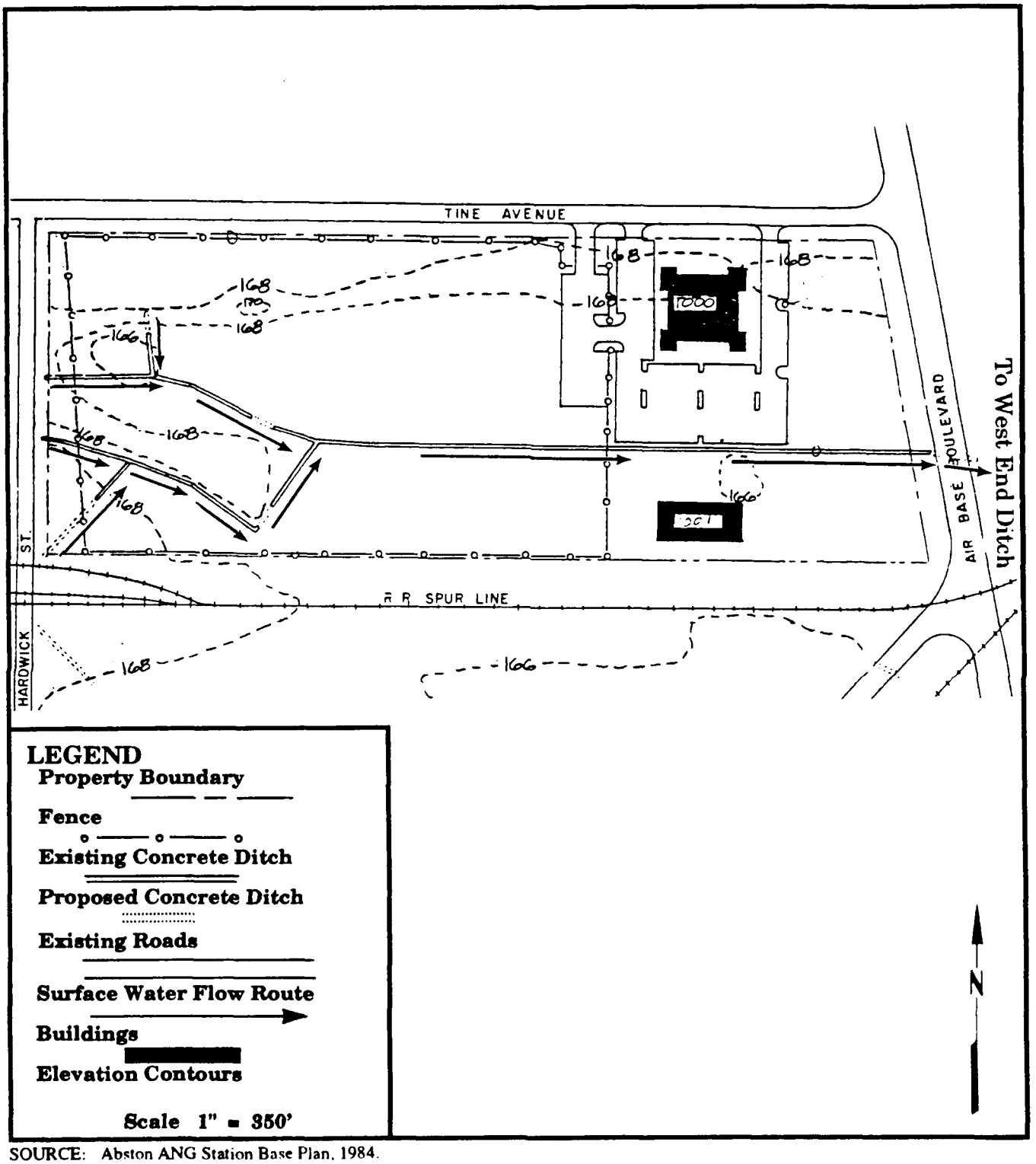
1. Surface Water

The Station is located in the Alabama River drainage basin. Surface water is collected in a series of open concrete ditches where it is transported eastward to the West End Ditch (Figure III.4). The West End Ditch then meanders northward 7 miles where it flows directly into the Alabama River (Figure III-5). The Station has been classified as located outside the 100-year flood plain of the Alabama River (Federal Emergency Management Agency, 1987).

2. Groundwater

The principal aquifers in Montgomery County are the Eutaw, Gordo, and Coker Formations. More specifically with respect to the Station, the Eutaw Formation and the Quaternary Alluvium are of primary concern. The Eutaw is the shallowest of the major aquifers and immediately underlies the porous alluvium in the vicinity of the Station.

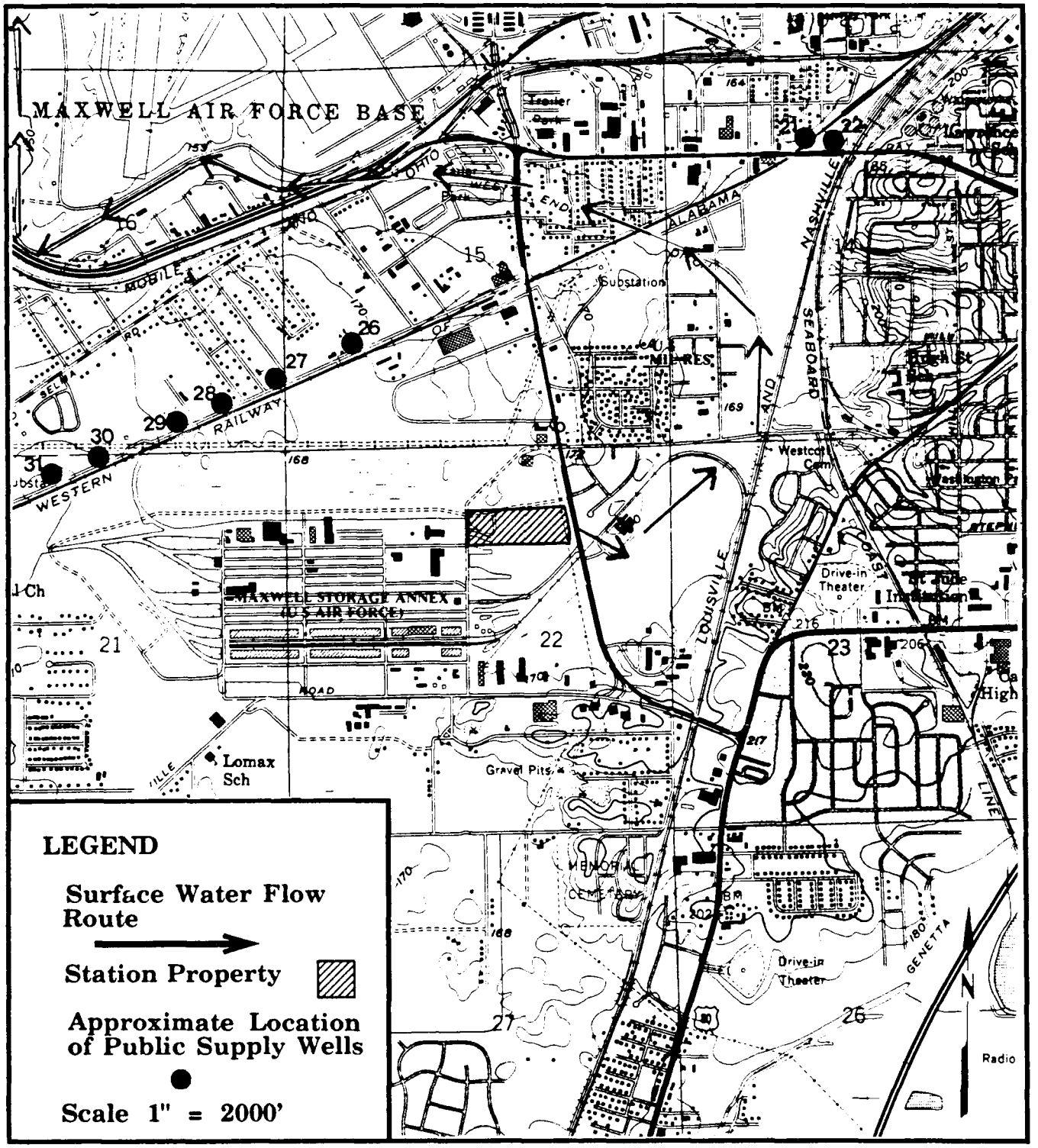
The Eutaw is a confined artesian aquifer except where it crops out near the surface and is in contact with porous surficial deposits. Groundwater recharge of the Eutaw aquifer occurs in areas of near surface outcrops. The Eutaw aquifer outcrops near the surface and underlies the alluvial deposits of the



SOURCE: Abston ANG Station Base Plan, 1984.

Figure III.4

Station Drainage Map



SOURCE: USGS, Montgomery, South Quadrangle (Alabama), 7.5 Minute Series (Topographic), 1981.

Figure III.5

Surface Water Flow Route Map

Alabama River in Montgomery County and westward from that point. The Eutaw aquifer is in hydraulic communication with the permeable alluvial deposits, and it is principally recharged by these deposits (Powel et al, 1957 and Scott et al, 1987). As a result of the Station being located in the floodplain of the Alabama River, it is situated in a principal recharge area for the Eutaw aquifer. Recharge of the Eutaw and Gordo aquifers in the City of Montgomery area is greatly enhanced by cones of depression in the potentiometric surface that have formed in response to pumpage from municipal wells (Scott et al, 1987).

The direction of groundwater movement in the Eutaw aquifer at the Station location is interpreted from potentiometric maps as being to the northwest (Scott et al, 1987). The Eutaw is screened in wells in both the Montgomery County North and West Municipal Water Well Fields from depths of 100 to 200 feet, respectively. The Montgomery County West Municipal Water Well Field is the closest public water supply, and the nearest well is located approximately 0.5 miles north/northwest from the Station as shown in Figure III.5 (CH^2M Hill, 1989). Pumpage from the Montgomery County West Municipal Water Well Field locally enhances groundwater movement in a northwesterly direction at the Station location; this is attributed to a cone of depression existing in the potentiometric surface that results from large withdrawals of groundwater from the field. Regional groundwater movement, however, takes place in a down dip or southeasterly direction from the principal recharge area (Scott et al, 1987).

Alluvium deposits underlying the flood plain at the Station location are a potential source of water supply; however, they are not generally developed for public use except in a few cases in the Montgomery County North Municipal Water Well Field (Scott et al, 1987). The alluvium is an unconfined aquifer and is recharged locally. According to John C. Scott of the United States Geological Survey (USGS) in Montgomery, the minimum depth from the surface to the water table occurs between 6 and 10 feet at the Station. Principal movement of groundwater here is also in a northwesterly direction. Groundwater movement in alluvium deposits can be significantly influenced on a localized basis through pumpage from shallow wells (Scott et al, 1987). However, this should not be the case at the Station location since no actively pumping wells exist in the immediate vicinity.

The Station is located in an area of high susceptibility for groundwater contamination should a release occur. This is attributed to the relatively porous soils and very porous alluvial deposits underlying the Station. Alluvial deposits act as both a shallow aquifer and as a direct source of groundwater for the Eutaw Formation. The alluvium directly overlies and is in hydraulic communication with the Eutaw in its principal recharge area. Furthermore, the withdrawal of large volumes of groundwater from the Montgomery County West Municipal Water Well Field have produced a cone of depression in the

potentiometric surface at the Eutaw level (Scott et al, 1987). This locally enhances recharge of the aquifer in this area.

D. Critical Habitats/Endangered or Threatened Species

According to current records maintained by the Alabama Department of Conservation and Natural Resources, Alabama Natural Heritage Program, no endangered or threatened species of flora or fauna have been identified within a 1-mile radius of the Station. No designated critical habitats exist in this area.

The U.S. Fish and Wildlife Service has not surveyed and mapped wetlands within a 1-mile radius of the Station. However, the Montgomery South, Alabama quadrangle map (United States Geological Survey, 1981) suggests the presence of minor wetlands approximately one-half mile north and northwest of the Station.

The Station is located in a major recharge area for the Eutaw aquifer, which is an important source of potable water for the residents of Montgomery and especially for residents of rural areas in Montgomery County (Scott et al, 1987).

IV. SITE EVALUATION

A. Activity Review

A review of Station records and interviews with personnel were used to identify specific operations in which the majority of hazardous materials and/or hazardous wastes are used, stored, processed, and disposed. Fresh product diesel fuel and automotive gasoline (MOGAS) are stored in tank trucks and fuel trailers parked at the Station. The 280th CCS generates hazardous wastes primarily through its vehicle maintenance operations. Vehicle maintenance personnel are assigned to the Station, but the maintenance activities occur at Maxwell Air Force Base. Consequently, negligible quantities of hazardous wastes are generated, stored, or disposed of at the Station. For this reason, the Hazardous Waste Disposal Summary that is normally included in this section was not developed.

The potable water supply and sanitary sewer services for the Station are provided by the Water Works and Sanitary Sewer Board of the City of Montgomery. No water wells are present within the Station's boundaries.

B. Disposal/Spill Site Information, Evaluation, and Hazard Assessment

Four persons were interviewed to identify and locate potential sites that may have been contaminated by hazardous wastes as a result of past Station operations. No potentially contaminated sites were identified.

V. CONCLUSIONS

Information obtained through interviews with four present Station personnel, a review of Station records, and field observations indicated that there are no potentially contaminated disposal and/or spill sites on Station property.

VI. RECOMMENDATIONS

No further IRP investigation is recommended for the Station.

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United States Congress. Superfund Amendments and Reauthorization Act of 1986. Public Law 99-499, (1986).

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United States Department of Defense. Defense Environmental Quality Program Policy Memorandum (DEQPPM 80-6). June 1980.

United States Environmental Protection Agency. Federal Register. 47: 137, U.S. Government Printing Office, Washington, D.C., July 16, 1982.

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GLOSSARY OF TERMS

ALLUVIAL - Pertaining to or composed of alluvium, or deposited by a stream or running water.

ALLUVIUM - A general term for detrital deposits made by streams on river beds, flood plains, and alluvial fans. The term applies to stream deposits of recent time.

ANNUAL PRECIPITATION - The total amount of rainfall and snowfall for the year.

AQUIFER - A body of rock that is sufficiently permeable to conduct groundwater and yield economically significant quantities of water to wells and springs.

ARGILLACEOUS - Like or containing clay.

ARTESIAN AQUIFER - A water-bearing bed that contains water under hydrostatic pressure.

BASIN - (a) A depressed area with no surface outlet; (b) A drainage basin or river basin; (c) A low area in the Earth's crust, of tectonic origin, in which sediments have accumulated.

BAY - A wide, curving open indentation, recess, or inlet of a sea or lake into the land or between two capes or headlands, larger than a cove, and usually smaller than, but of the same general character as a gulf.

BED [stratig] - The smallest formal unit in the hierarchy of lithostratigraphic units. In a stratified sequence of rocks it is distinguishable from layers above and below. A bed commonly ranges in thickness from a centimeter to a few meters.

BEDDING [stratig] - The arrangement of sedimentary rock in beds or layers of varying thickness and character.

BEDROCK - A general term for the rock, usually solid, that underlies soil or other unconsolidated, superficial material.

BOULDER - A detached rock mass larger than a cobble, having a diameter greater than 256 mm, being somewhat rounded or otherwise distinctly shaped by abrasion in the course of transport.

CALCAREOUS - Containing calcium carbonate.

CLAY [soil] - A rock or mineral particle in the soil having a diameter less than 0.002 mm (2 microns).

CLAY [geol] - A rock or mineral fragment or a detrital particle of any composition smaller than a fine silt grain, having a diameter less than 1/256 mm (4 microns).

COARSE-TEXTURED (light textured) SOIL - Sand or loamy sand.

CONE OF DEPRESSION - The depression of heads around a pumping well caused by the withdrawal of water.

CONFINED AQUIFER - An aquifer bounded above and below by impermeable beds, or by beds of distinctly lower permeability than that of the aquifer itself.

CONGLOMERATE - A coarse-grained sedimentary rock, composed of rounded pebbles, cobbles, and boulders, set in a fine-grained matrix of sand or silt, and commonly cemented by calcium carbonate, iron oxide, silica, or hardened clay.

CONSOLIDATION - Any process whereby loosely aggregated, soft, or liquid earth materials become firm and coherent rock; specif. the solidification of a magma to form an igneous rock, or the lithification of loose sediments to form a sedimentary rock.

CONTAMINANT - As defined by Section 101(f)(33) of Superfund Amendments and Reauthorization Act of 1986 (SARA) shall include, but not be limited to any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction), or physical deformation in such organisms or their offspring; except that the term "contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under:

(a) any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act,

(b) any element, compound, mixture, solution, or substance designated pursuant to Section 102 of this Act,

(c) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal

Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress),

(d) any toxic pollutant listed under Section 307(a) of the Federal Water Pollution Control Act,

(e) any hazardous air pollutant listed under Section 112 of the Clean Air Act, and

(f) any imminently hazardous chemical substance or mixture with respect to which the administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act;

and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

CREEK - A term generally applied to any natural stream of water, normally larger than a brook but smaller than a river.

CRETACEOUS - The final period of the Mesozoic era. Thought to have covered the time span between 135 and 65 million years ago; also, the corresponding system of rocks.

CRITICAL HABITAT - The specific areas within the geographical area occupied by the species on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management consideration or protection.

DEPOSITS - Earth material of any type, either consolidated or unconsolidated, that has accumulated by some natural process or agent.

DIP - The angle that a stratum or any planar feature makes with the horizontal, measured perpendicular to strike and in the vertical plane.

DOLOMITE - A sedimentary rock consisting of calcium magnesium carbonate, $CaMg(CO_3)_2$. Occurs in beds formed by the alteration of limestone.

DRAINAGE CLASS (natural) - Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

Excessively drained - Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky,

or shallow. Some are steep. All are free of the mottling related to wetness.

Somewhat excessively drained - Water is removed from the soil rapidly. Many somewhat excessively drained soils are sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.

Well-drained - Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well-drained soils are commonly medium textured. They are mainly free of mottling.

Moderately well drained - Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically for long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum, or periodically receive high rainfall, or both.

Somewhat poorly drained - Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.

Poorly drained - Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough periods during the growing season that most mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, nearly continuous rainfall, or a combination of these.

Very poorly drained - Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients, as for example in "hillpeats" and "climatic moors."

DRAINAGEWAY - A channel or course along which water moves in draining an area.

ENDANGERED SPECIES - Any species which is in danger of extinction throughout all or a significant portion of its range, other than a species of the Class Insecta determined by the secretary to constitute a pest whose protection would present an overwhelming and overriding risk to man.

EROSION - The general process or the group of processes whereby the materials of the Earth's crust are loosened, dissolved, or worn away, and simultaneously moved from one place to another by natural agencies, but usually exclude mass wasting.

FINE-GRAINED - Said of a soil in which silt and/or clay predominate.

FINE-TEXTURED (heavy textured) SOIL - Sandy clay, silty clay, and clay.

FLOOD PLAIN - The surface or strip of relatively smooth land adjacent to a river channel, constructed by the present river in its existing regimen and covered with water when the river overflows its banks.

FORMATION - A body of rock strata that consists dominantly of a certain lithologic type or combination of types.

GLAUCONITIC SANDSTONE - greensand, composed of a green mineral, closely related to the micas and essentially a hydrous potassium iron silicate.

GRAVEL - An unconsolidated, natural accumulation of rounded rock fragments resulting from erosion, consisting predominantly of particles larger than sand, such as boulders, cobbles, pebbles, granules or any combination of these fragments.

GROUNDWATER - Refers to the subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated.

HARM - Hazard Assessment Rating Methodology - A system adopted and used by the United States Air Force to develop and maintain a priority listing of potentially contaminated sites on installations and facilities for remedial action based on potential hazard to public health, welfare, and environmental impacts. (Reference: DEQPPM 81-5, December 11, 1981.)

HAS - Hazard Assessment Score - The score developed by using the Hazard Assessment Rating Methodology (HARM).

HAZARDOUS MATERIAL - Any substance or mixture of substances having properties capable of producing adverse effects on the health and safety of the human being. Specific regulatory definitions also found in OSHA and DOT rules.

HAZARDOUS WASTE - A solid or liquid waste that, because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

a. cause, or significantly contribute to, an increase in mortality or an increase in serious or incapacitating reversible illness, or

b. pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

HERBICIDE - A weed killer.

IGNEOUS ROCKS - Rock or mineral that has solidified from molten or partially molten material, i.e. from magma.

INTERBEDDED - Beds lying between or alternating with others of different character; especially rock material laid down in sequence between other beds.

LIMESTONE - A sedimentary rock consisting of the mineral calcite (calcium carbonate, $CaCO_3$) with or without magnesium carbonate.

LITHOLOGY - 1. The description of rocks. 2. The physical character of a rock.

LOAM - A rich, permeable soil composed of a friable mixture of relatively equal proportions of sand, silt, and clay particles, and usually containing organic matter.

MEAN LAKE EVAPORATION - The total evaporation amount for a particular area; amount based on precipitation and climate (humidity).

METAMORPHIC ROCK - Any rock derived from pre-existing rocks by mineralogical, chemical, and/or structural changes, essentially in solid state, in response to marked changes in temperature, pressure, shearing stress, and chemical environment, generally at depth in the Earth's crust.

MIGRATION [Contaminant] - The movement of contaminants through pathways (groundwater, surface water, soil, and air).

MINERAL - A naturally occurring inorganic element or compound having an orderly internal structure and characteristic chemical composition, crystal form and physical properties.

NET PRECIPITATION - Precipitation minus evaporation.

OUTCROP - That part of a geologic formation or structure that appears at the surface of the Earth; also, bedrock that is covered only by surficial deposits such as alluvium.

PERMEABILITY - The capacity of a porous rock, sediment, or soil for transmitting a fluid without impairment by the structure of the medium; it is a measure of the relative ease of fluid flow under unequal pressure.

PLEISTOCENE - The first epoch of the Quaternary period; the Pleistocene began two to three million years ago and lasted until the start of the Holocene period some 8000 years ago.

POROSITY - The ratio of the aggregate volume of interstices in a rock or soil to its total volume.

POTENTIOMETRIC SURFACE - An imaginary surface representing the total head of groundwater and defined by the level to which water will rise in a well. The water table is a particular potentiometric surface.

QUARTZ - A crystalline silica, an important rock forming mineral: SiO_2. Occurs either in transparent hexagonal crystals (colorless or colored by impurities) or in crystalline. Forms the major proportion of most sands and has a widespread distribution in igneous, metamorphic and sedimentary rocks.

QUATERNARY - The second period of the Cenozoic era, following Tertiary; also, the corresponding system of rocks.

RECENT - An epoch of the Quaternary period which covers the span of time from the end of the Pleistocene epoch, approximately 8000 years ago, to the present. Also called the Holocene epoch.

RIVER - A general term for a natural freshwater surface stream of considerable volume and a permanent or seasonal flow, moving in a definite channel toward a sea, lake, or another river.

SAND - A rock or mineral particle in the soil, having a diameter in the range 0.52 - 2 mm.

SANDSTONE - A medium-grained fragmented sedimentary rock composed of abundant round or angular sand fragments set in a fine-grained matrix (silt

or clay) and more or less firmly united by a cementing material (commonly silica, iron oxide, or calcium carbonate).

SANDY LOAM - A soil containing 43 - 85% sand, 0 - 50% silt, and 0 - 20% clay, or containing at least 52% sand and no more than 20% clay and having the percentage of silt plus twice the percentage of clay exceeding 30% or containing 43 - 52% sand, less than 50% silt, and less than 7% clay.

SCHIST - A medium- or coarse-grained, strongly foliated, crystalline rock; formed by dynamic metamorphism.

SEDIMENTARY ROCK - A rock resulting from the consolidation of loose sediment that has accumulated in layers; e.g., a clastic rock (such as conglomerate or tillite) consisting of mechanically formed fragments of older rock transported from its source and deposited in water or from air or ice; or a chemical rock (such as rock salt or gypsum) formed by precipitation from solution; or an organic rock (such as certain limestones) consisting of the remains or secretions of plants and animals.

SHALE - A fine-grained detrital sedimentary rock, formed by the consolidation (especially by compression) of clay, silt, or mud.

SILT [soil] - (a) A rock or mineral particle in the soil, having a diameter in the range 0.002-0.005 mm; (b) A soil containing more than 80% silt-size particles, less than 12% clay, and less than 20% sand.

SILT LOAM - A soil containing 50 - 88% silt, 0 - 27% clay and 0 - 50% sand.

SOIL PERMEABILITY - The characteristic of the soil that enables water to move downward through the profile. Permeability is measured as the distance per unit time that water moves downward through the saturated soil.

Terms describing permeability are:

Very Slow	-	less than 0.06 inches per hour (less than 4.24×10^{-5} cm/sec)
Slow	-	0.06 to 0.20 inches per hour (4.24×10^{-5} to 1.41×10^{-4} cm/sec)
Moderately Slow	-	0.20 to 0.63 inches per hour (1.41×10^{-4} to 4.45×10^{-4} cm/sec)
Moderate	-	0.63 to 2.00 inches per hour (4.45×10^{-4} to 1.41×10^{-3} cm/sec)

Moderately Rapid - 2.00 to 6.00 inches per hour (1.41×10^{-3} to 4.24×10^{-3} cm/sec)

Rapid - 6.00 to 20.00 inches per hour (4.24×10^{-3} to 1.41×10^{-2} cm/sec)

Very Rapid - more than 20.00 inches per hour (more than 1.41×10^{-2} cm/sec)

(Reference: U.S.D.A. Soil Conservation Service)

SOLVENT - A substance, generally a liquid, capable of dissolving other substances.

STONE - A general term for rock that is used for construction, either crushed for use as aggregate or cut into shaped blocks as dimension stone.

STRATIGRAPHIC UNIT - A body of strata recognized as a unit for description, mapping, or correlation.

STRIKE - The direction taken by a structural surface, e.g., a bedding or fault plane, as it intersects the horizontal.

SURFACE WATER - All water exposed at the ground surface, including streams, rivers, ponds, and lakes.

TERRACE - Any long, narrow, relatively level or gently inclined surface, generally less broad than a plain, bounded along one edge by a steeper descending slope and along the other by a steeper ascending slope.

THREATENED SPECIES - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

TOPOGRAPHY - The general conformation of a land surface, including its relief and the position of its natural and man-made features.

UNCONSOLIDATED - (a) Sediment that is loosely arranged or unstratified, or whose particles are not cemented together, occurring either at the surface or at depth. (b) Soil material that is in a loosely aggregated form.

VALLEY - Any low-lying land bordered by higher ground, especially an elongate, relatively large, gently sloping depression of the earth's surface, commonly situated between two mountains or between ranges of hills and mountains, and often containing a stream or river with an outlet. It is usually developed by stream or river erosion, but can be formed by faulting.

WATER TABLE - The upper limit of the portion of the ground that is wholly saturated with water; the surface on which the fluid pressure in the pores of a porous medium is exactly atmospheric.

Appendix A

Outside Agency Contact List

OUTSIDE AGENCY CONTACT LIST

1) Alabama Air National Guard
187th Tactical Fighter Group
Civil Engineering
P.O. Box 250284
Montgomery, Alabama 36125-0284
Captain Michelle Fuller
(205) 284-7302

2) Alabama Department of Environmental Management
1751 Dickinson Drive
Montgomery, Alabama
James McIndoe
(205) 242-6078

3) Alabama Natural Heritage Program
Alabama Department of Conservation and Natural Resources
State Lands Division
64 North Union Street
Montgomery, Alabama 36130
Mark A. Bailey
(205) 261-3007

4) City of Montgomery
Planning, Programming and Transportation
P.O. Box 1111
Montgomery, Alabama 36101
Kloeb Loflin
(205) 241-2712

5) Federal Emergency Management Agency
Natural and Technological Hazards Division
1371 Peachtree Street NE
Suite 735
Atlanta, Georgia 30309
Don Hansford
(404) 853-4424

6) Industrial Development Board of the City of Montgomery
1325 Kershaw Street
P.O. Box 9111
Montgomery, Alabama 36108
Lois Kelly
(205) 265-1511

OUTSIDE AGENCY CONTACT LIST (continued)

7) Publication Sales Office
Geological Survey of Alabama
P.O. Box O
Tuscaloosa, Alabama 35486-9780
(205) 349-2852 (Ext. 303)

8) United States Department of Agriculture
Soil Conservation Service
4510 South Court Street
Montgomery, Alabama 36105
David J. Barrow
(205) 832-7257

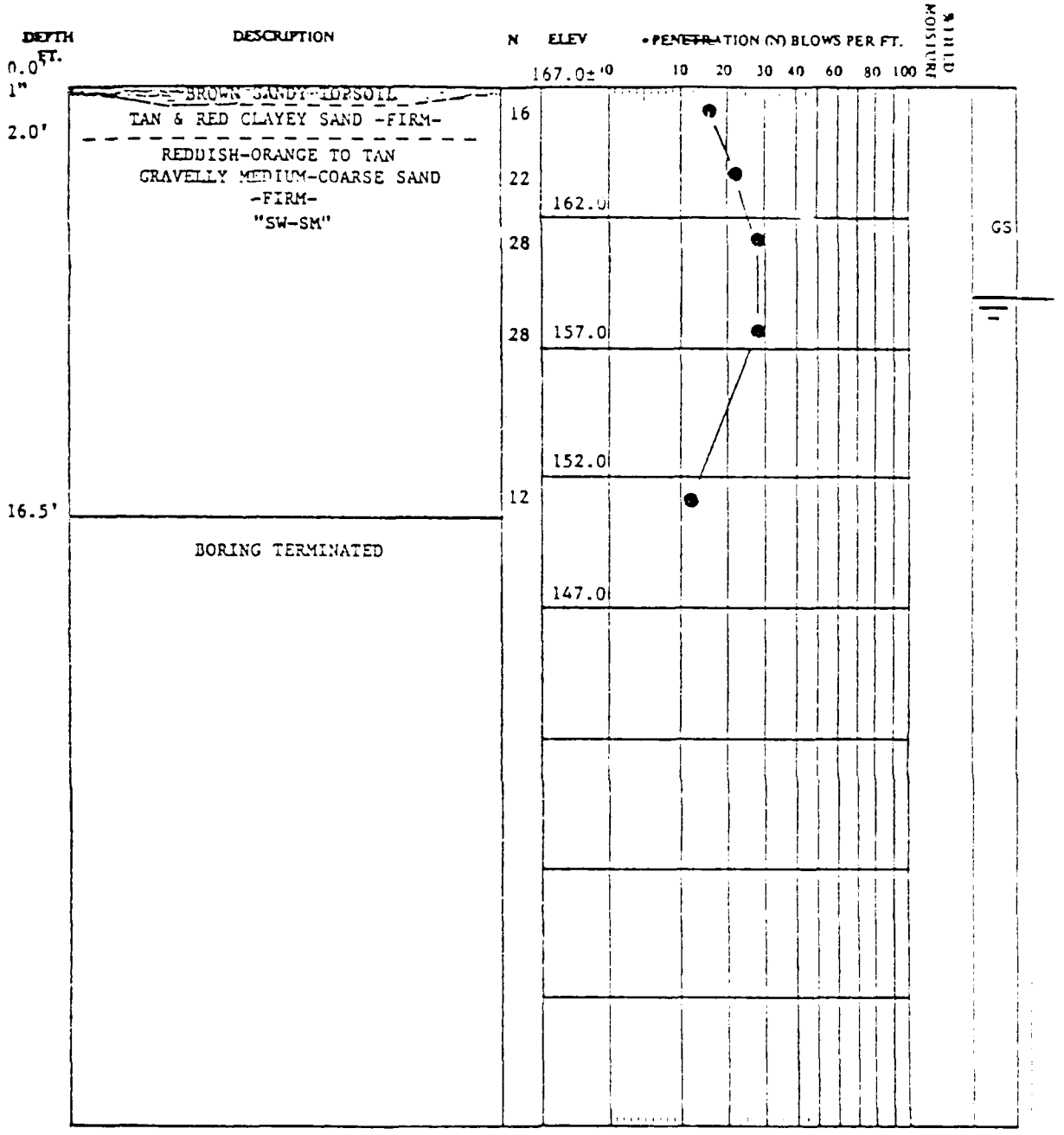
9) United States Fish and Wildlife Service
P.O. Drawer 1190
Daphne, Alabama 36526
Sandy Tucker
(205) 690-2181

10) United States Geological Survey
Water Resources Division
2721 Gunter Park Drive West
Montgomery, Alabama 36109
John C. Scott
(205) 223-7511

11) Water Works and Sanitary Sewer
Board of the City of Montgomery
22 Bibb Street
P.O. Box 1631
Montgomery, Alabama 36102
Roy D. Holmberg
(205) 240-1626

Appendix B

Soil Borings at the Station



Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table After 1 Hour

Water Table

Boring Caved After 1 Hour

FORM D-510

TEST BORING RECORD

BORING NO. B-1

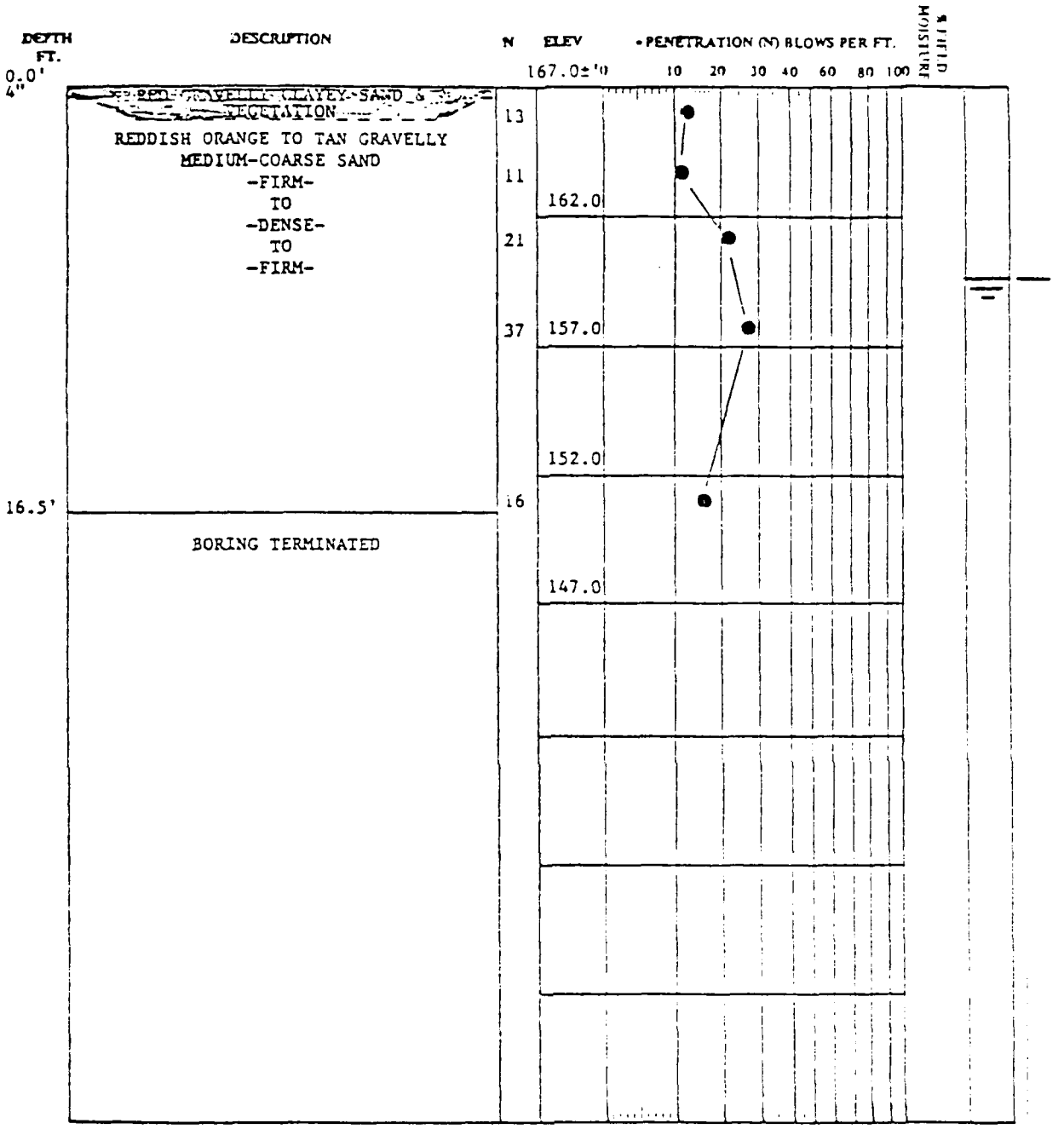
TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES, INC.

CTL



Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table After 1 Hour

Water Table

Boring Caved After 1 Hour

FORM •D-510

TEST BORING RECORD

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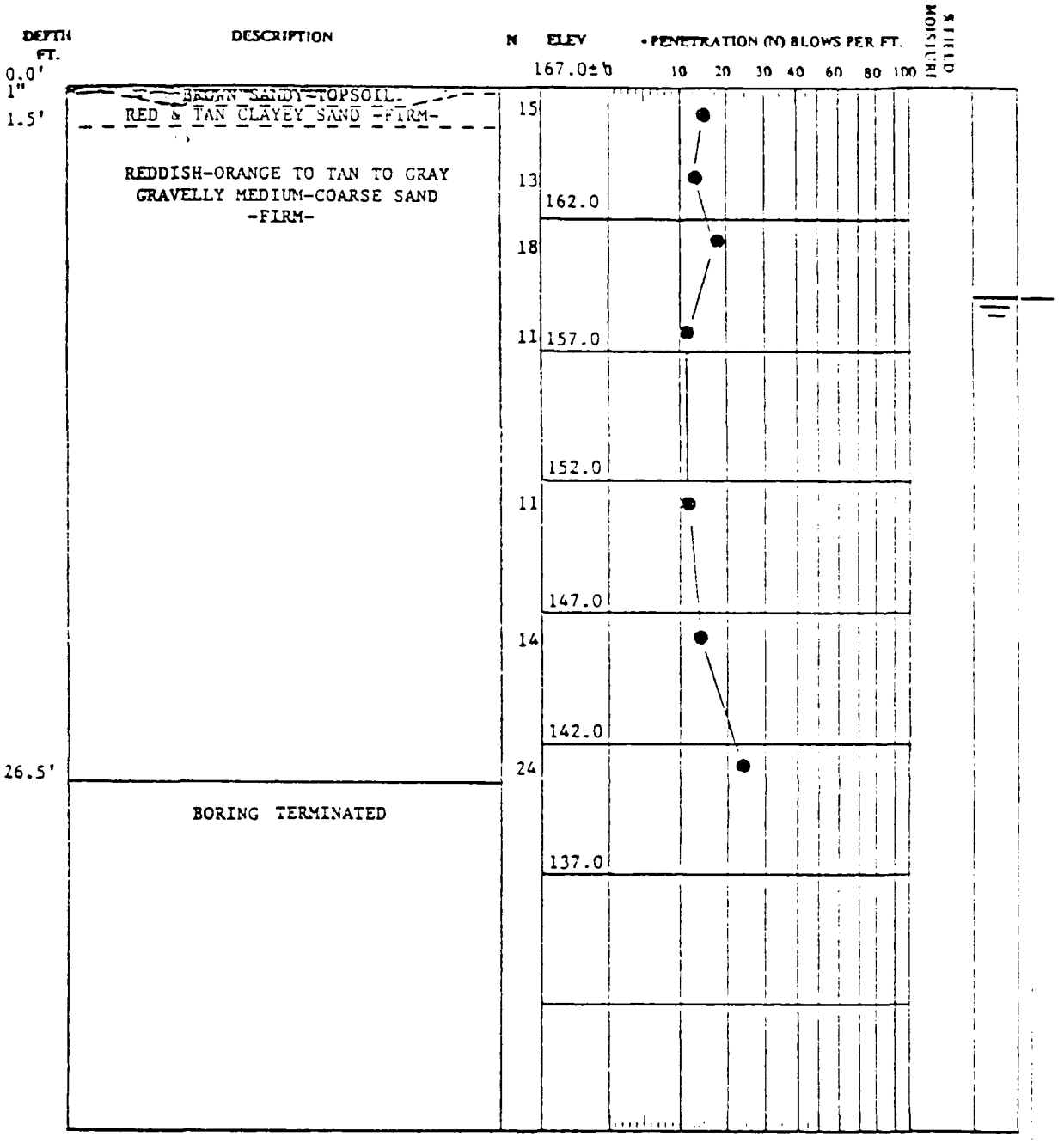

Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table After 1 Hour

Water Table

Boring Caved After 1 Hour

FORM #D-510

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TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES INC

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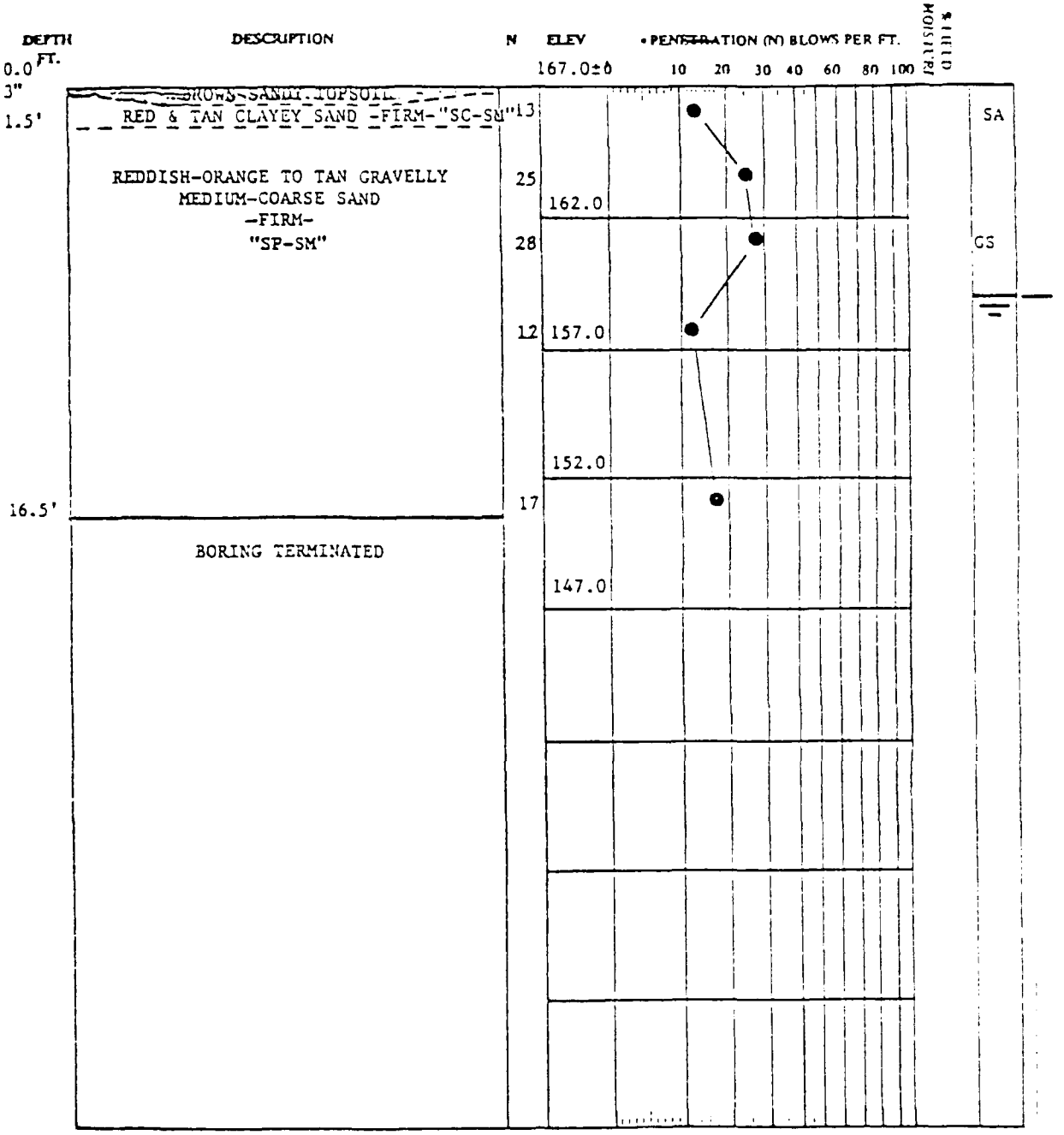


Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table After 1 Hour

Water Table

Boring Caved After 1 Hour

FORM #D-510

TEST BORING RECORD

BORING NO. B-4

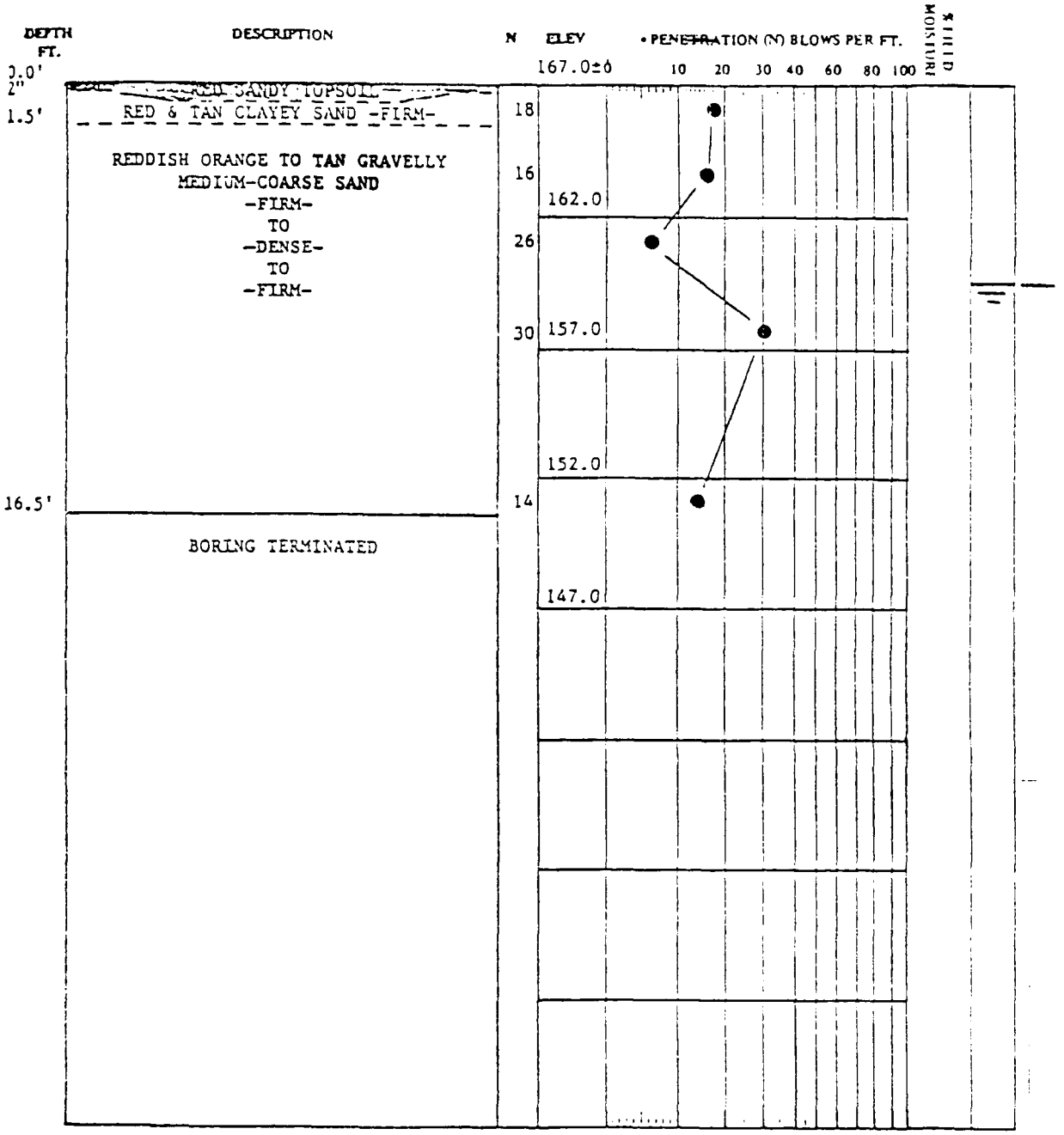
TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES INC

CTL



Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table After 1 Hour

Water Table

Boring Caved After 1 Hour

FORM #D-510

TEST BORING RECORD

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TYPE BORING SB

DATE DRILLED 4/11/85

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CHRISTIAN TESTING LABORATORIES INC

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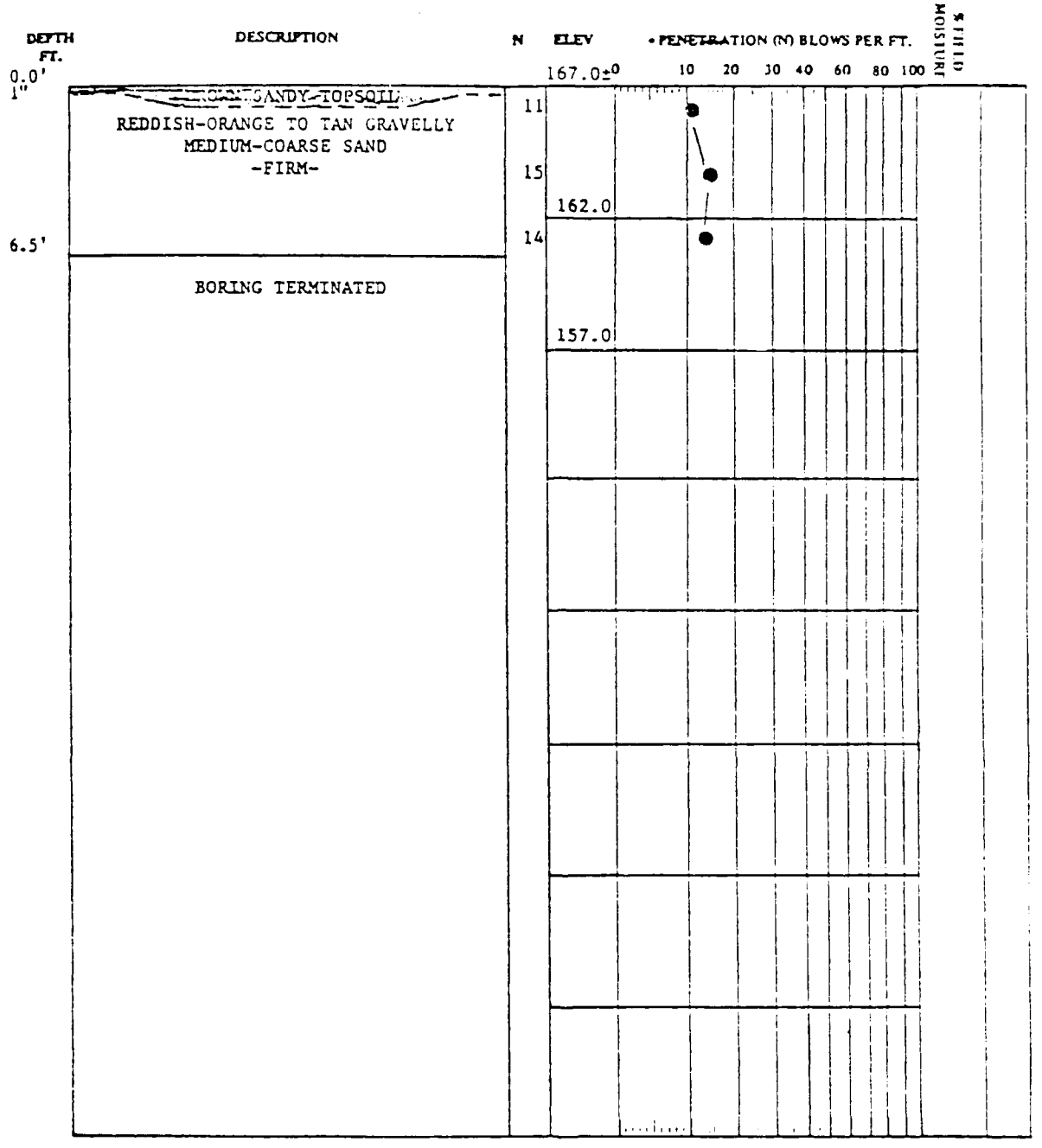

Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table

Water Table

Boring Caved

FORM •D-510

TEST BORING RECORD

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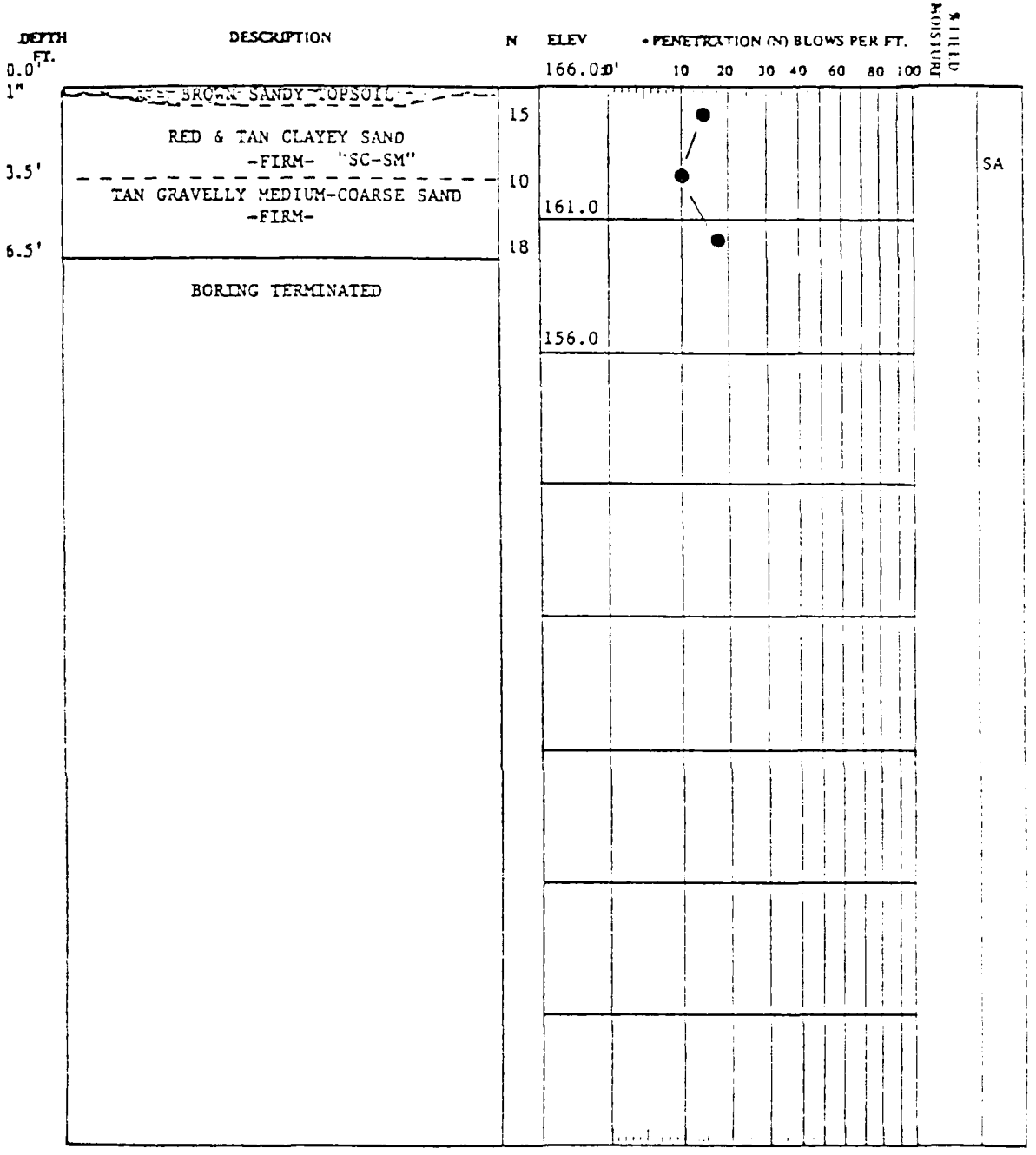
TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES, INC.

CTL



Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table

Water Table

Boring Caved

FORM •D-510

TEST BORING RECORD

BORING NO. B-7

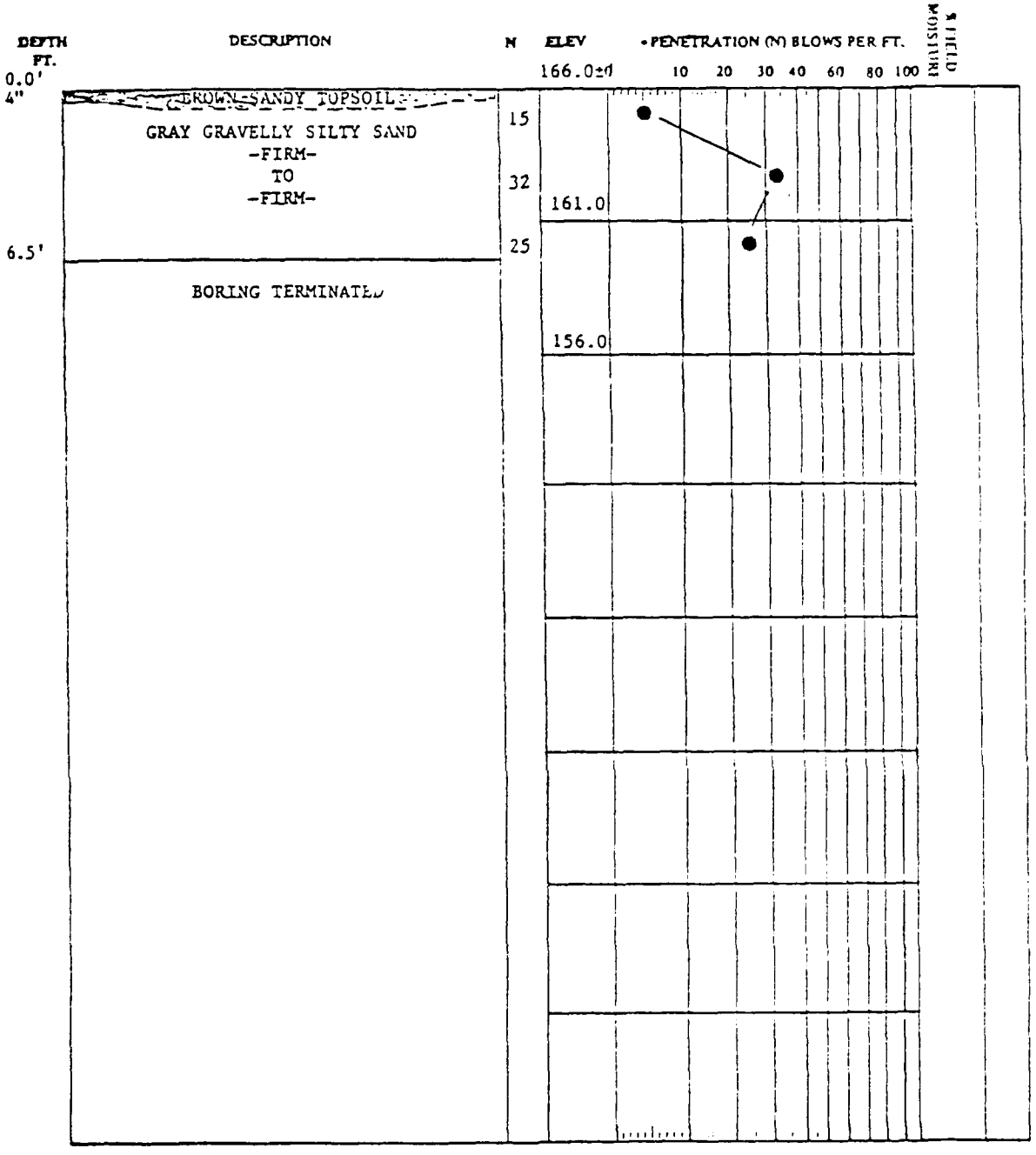
TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES, INC.

CTL



Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table

Water Table

Boring Caved

FORM #D-510

TEST BORING RECORD

BORING NO. B-8

TYPE BORING SB

DATE DRILLED 4/11/85

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES, INC.

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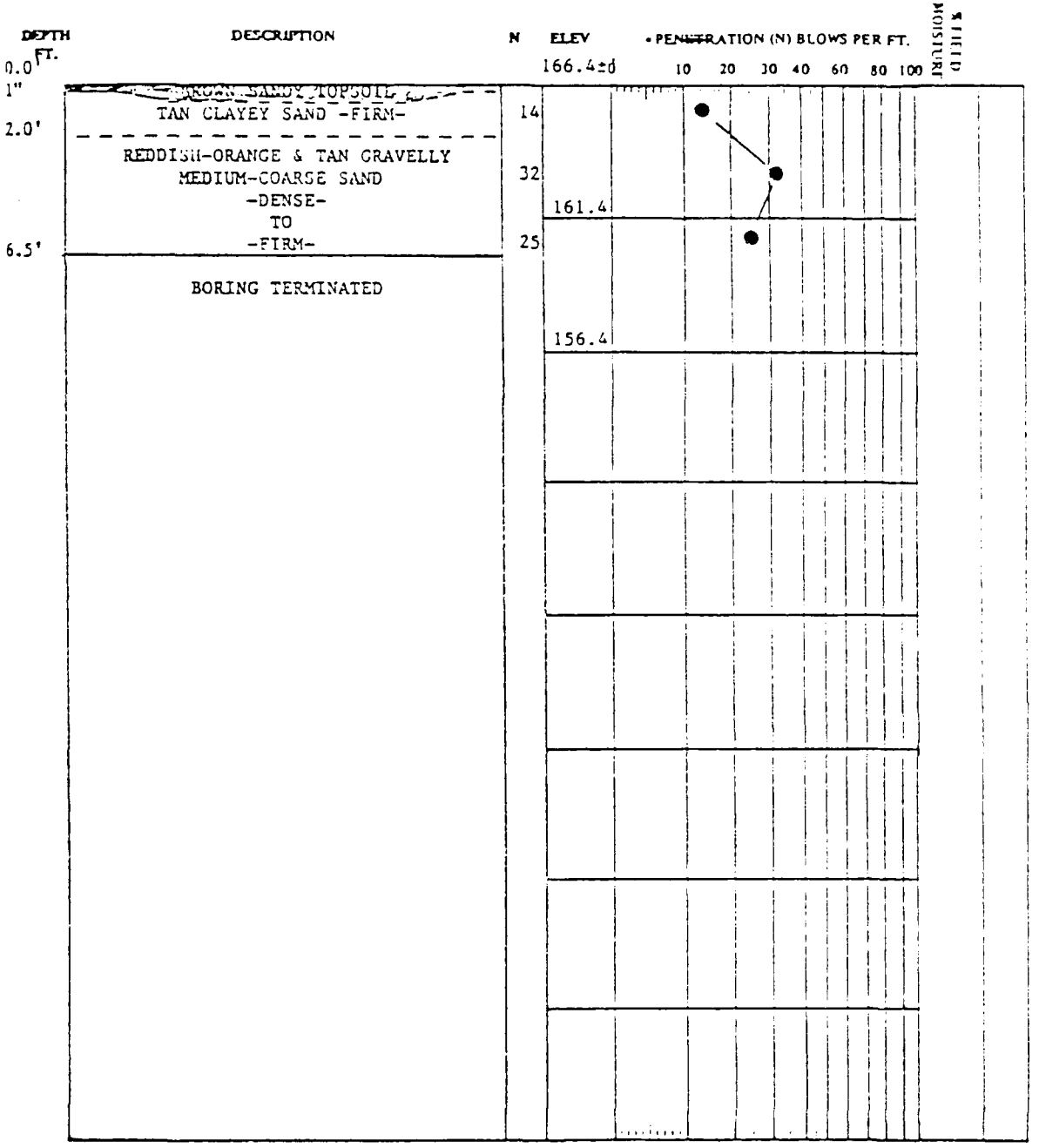

Boring and Sampling Meets ASTM D-1586

Penetration is the Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in I.D. Sampler 1 Ft.

Undisturbed Sample

Water Table

Water Table

Boring Caved

FORM •D-510

TEST BORING RECORD

BORING NO. B-9

TYPE BORING SB

DATE DRILLED 4/11/95

JOB NO. SS-2295-85

CHRISTIAN TESTING LABORATORIES INC

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